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Feinberg School of Medicine

Global Health Day

Adolescent Birth Outcomes in Botswanan Teenagers

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Background: Adolescent pregnancy remains a significant social, economic, and health care problem in sub-Saharan Africa. The adolescent birth rate in Botswana was 50 per 1000 in 2017, exceeding the global rate of 44 per 1000. There are limited data for adverse birth outcomes among adolescents in Botswana, especially those living with HIV. The primary goal of our study was to characterize adverse birth outcomes in adolescent women in comparison with adult women in Botswana.

Methods: Data were analyzed from the ongoing Tsepamo Study being conducted through the Botswana-Harvard Partnership. The Tsepamo surveillance extracts maternal and infant data from the obstetric records at the time of discharge from government maternity wards in Botswana. The adolescent sub-analysis included the 8 initial Tsepamo sites with complete data throughout the July 2014-July 2020 study period, representing approximately 45% of all births in the country during those years. We considered the participants between 10 to 19 years of age as adolescents and chose women between 20 to 35 years of age to serve as comparative adults. We performed Chi squared tests to evaluate for differences in the prevalence of adverse birth outcomes by age category.

Results: Between July 2014 and July 2020, 165,457 births were recorded births in the Tsepamo database at the 8 original sites, including 21,290 (12.9%) adolescents and 123,094 (74.4%) aged 20-35. Among adolescents, 242 (1.2%) were aged 10-14, and 21,048 (98.9%) were aged 15-19. HIV infections were high and increased markedly by age: 2.9% among those 10-14, 7.6% among those 15-19, and 22.5% among those 25-35. Compared with 20-35 year old adults, adolescents were more likely to have preterm births (19.2% vs. 15.5%, $p < .001$) and small for gestational age infants (15.0% vs. 13.3%, $p < .001$).

Conclusion: The prevalence of adolescent HIV infection and adolescent pregnancy in Botswana is high. Linking HIV prevention and family planning strategies for this age group may help break the cycle of HIV infection in young women. Additional research needs to be conducted to better understand the potential of adverse birth outcomes among adolescents on longer-term infant outcomes.

This research was presented as part of Northwestern University Institute for Global Health's Annual Global Health Day on Friday, December 4th, 2020.